

### **ABSTRACT OF THE DISCLOSURE**

Metal residue on a semiconductor surface resulting from metal chemical mechanical polishing (“CMP”) process are eradicated using a dry clean process. The dry cleaning uniformly removes or substantially eliminates metal residue from the surface of the semiconductor. An unintended metal short that may be present due to the residue may thereby be eliminated by adjusting the dry cleaning process based on a type of dry cleaning material, and type and a thickness of the residue.